National Institute of Environmental Health Sciences

Preventing heat-related morbidity and mortality: New approaches in a changing climate

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Abstract:

Due to global climate change, the world will, on average, experience a higher number of heat waves, and the intensity and length of these heat waves is projected to increase. Knowledge about the implications of heat exposure to human health is growing, with excess mortality and illness occurring during hot weather in diverse regions. Certain groups, including the elderly, the urban poor, and those with chronic health conditions, are at higher risk. Preventive actions include: establishing heat wave warning systems; making cool environments available (through air conditioning or other means); public education; planting trees and other vegetation; and modifying the built environment to provide proper ventilation and use materials and colors that reduce heat build-up and optimize thermal comfort. However, to inspire local prevention activities, easily understood information about the strategies' benefits needs to be incorporated into decision tools. Integrating heat health information into a comprehensive adaptation planning process can alert local decision-makers to extreme heat risks and provide information necessary to choose strategies that yield the largest health improvements and cost savings. Tools to enable this include web-based programs that illustrate effective methods for including heat health in comprehensive local-level adaptation planning; calculate costs and benefits of several activities; maps showing zones of high potential heat exposure and vulnerable populations in a local area; and public awareness materials and training for implementing preventive activities. A new computer-based decision tool will enable local estimates of heat-related health effects and potential savings from implementing a range of prevention strategies.

Source: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2793324

Resource Description

Early Warning System: ☒

resource focus on systems used to warn populations of high temperatures, extreme weather, or other elements of climate change to prevent harm to health

A focus of content

Exposure : ☒

weather or climate related pathway by which climate change affects health

Temperature

Temperature: Extreme Heat

Geographic Feature: ☑

resource focuses on specific type of geography

None or Unspecified

Geographic Location: ☑

resource focuses on specific location

Non-United States, United States

Non-United States: Europe

Health Impact: ☑

specification of health effect or disease related to climate change exposure

Morbidity/Mortality

Intervention: ☑

strategy to prepare for or reduce the impact of climate change on health

A focus of content

Mitigation/Adaptation: ☑

mitigation or adaptation strategy is a focus of resource

Adaptation

Population of Concern: A focus of content

Population of Concern: ☑

populations at particular risk or vulnerability to climate change impacts

Children, Elderly, Low Socioeconomic Status, Pregnant Women, Workers

Other Vulnerable Population: people with chronic health conditions

Resource Type: ☑

format or standard characteristic of resource

Policy/Opinion, Review

Resilience: ☑

capacity of an individual, community, or institution to dynamically and effectively respond or adapt to shifting climate impact circumstances while continuing to function

A focus of content

Timescale: ☑

time period studied

Time Scale Unspecified

Vulnerability/Impact Assessment: ☑

resource focus on process of identifying, quantifying, and prioritizing vulnerabilities in a system

A focus of content